

CLAIMS

1 -28 (Canceled)

29. (New) A system to simulate a process of discrete events or tasks having a plurality of available resources associated therewith, the system comprising:

a model template defined by a plurality of tables, where each table is defined by one or more of entity parameters, task parameters, and resource parameters and where each table includes a mapping to one or more other tables of the plurality of tables;

a database that stores the model template and the plurality of tables;

a model application in communication with the database and which receives commands from a user, and, in response to the commands, builds a simulation model by retrieving the model template and the plurality of tables, by automatically associating entity, task, and resource input data from a business database system with the model template, and by automatically performing allocations of the resource input data to the task parameters;

an optimizing application in communication with the model application and which receives commands from a user, and, in response to the commands, selects one or more of the entity parameters, the task parameters, and the resource parameters of the simulation model and an objective function, defines bounds of the selected one or more of the entity parameters, the task parameters, and the resource parameters, and generates values for the objective function; and

a server that performs a simulation of the process by processing the simulation model, and based on the simulation, generates an output data file containing output data representative thereof.

30. (New) The system of claim 29 wherein the automatically performing allocations is based on processing of an efficiency resource matrix.

31. (New) The system of claim 29 further comprising an output template

that is stored in the database and wherein the server generates the output data filed based on the output template.

32. (New) A method to simulate a process of discrete events or tasks having a plurality of available resources associated therewith, the method comprising:

- providing a model template that is defined by a plurality of tables, where each table is defined by one or more of entity parameters, task parameters, and resource parameters and where each table includes a mapping to one or more other tables of the plurality of tables;
- storing the model template and the plurality of tables in a database;
- building a simulation model by retrieving the model template and the plurality of tables from the database, automatically associating entity, task, and resource input data from a business database system with the model template, and automatically performing allocations of the resource input data to the task parameters;
- optimizing the simulation model by defining bounds for one or more of the entity parameters, the task parameters, and the resource parameters as the relate to an objective function and generating values for the objective function;
- simulating the process by processing the simulation model; and
- generating an output data file containing output data based on the simulating.

33. (New) A storage medium encoded with machine-readable program code for simulating a process of discrete events or tasks having a plurality of available resources associated therewith, the program code including instructions for causing a computer to implement a method comprising:

- providing a model template that is defined by a plurality of tables, where each table is defined by one or more of entity parameters, task parameters, and resource parameters and where each table includes a mapping to one or more other tables of the plurality of tables;
- storing the model template and the plurality of tables in a database;
- building a simulation model by retrieving the model template and the plurality of tables

from the database, automatically associating entity, task, and resource input data from a business database system with the model template, and automatically performing allocations of the resource input data to the task parameters;

optimizing the simulation model by defining bounds for one or more of the entity parameters, the task parameters, and the resource parameters as the relate to an objective function and generating values for the objective function;

simulating the process by processing the simulation model; and

generating an output data file containing output data based on the simulating.